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CLAIMS:

What is claimed is:

1   1.   A method for self-defining data elements comprising:

2   associating a data element with metadata;

3   storing management information in the metadata;

4   providing one or more anchor points to begin

5   selected analysis processes; and

6   storing management rules and processing rules in the

7   metadata.

1   2.   The method of claim 1, wherein the management

2   information comprises a time stamp.

1   3.   The method of claim 1, wherein the management

2   information comprises a management rule.

1   4.   The method of claim 3, wherein the management rule

2   comprises one of performance criteria, reliability

3   criteria, availability criteria, and capacity criteria.

1   5.   The method of claim 1, wherein the management

2   information comprises a pointer to a management rule.

1   6.   The method of claim 1, wherein the management

2   information comprises a sequencing rule.

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1   7.   The method of claim 6, wherein the sequencing rule

2   comprises one of a logical rule, a time rule, and a

3   structure rule.

1   8.   The method of claim 1, wherein the management

2   information comprises a pointer to a sequencing rule.

1   9.   The method of claim 1, wherein the management

2   information comprises a management function for

3   accomplishing management rules.

1   10.   The method of claim 1, wherein associating is

2   accomplished by physically storing the metadata with the

3   data.

1   11.   The method of claim 1, wherein associating is

2   accomplished by storing a pointer with the data that

3   allows one to locate the metadata.

1   12.   The method of claim 1, wherein anchor points are

2   pointers to the current location the metadata for

3   selected data elements.

1   13.   The method of claim 1, wherein anchor points are

2   copies of the metadata for selected data elements.

1   14.   The method of claim 1, wherein processing rules

2   define the order of selecting data elements for

3   processing.

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1   15.   The method of 1, wherein processing rules define

2   controls for processing management information for each

3   data element.

1   16.   The method of claim 15, wherein the processing

2   controls include sequential processing in priority order.

1   17.   The method of claim 15, wherein the processing

2   controls include indexed processing following specific

3   tree structures first.

1   18.   The method of claim 15, wherein the processing

2   controls include parallel processing.

1   19.   The method of claim 18, wherein parallel processing

2   includes a separate instance of processing for each data

3   element found processed simultaneously.

1   20.   The method of claim 18, wherein parallel processing

2   includes a separate instance of processing for each data

3   element found processed concurrently.

1   21.   The method of claim 1, wherein management

2   information comprises a pointer to the location where

3   rules are stored.

1   22.   A self-defining data element for enhanced data

2   management and recovery, comprising:

3   a data portion; and

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4   a metadata portion,

5   wherein the metadata includes management information

6   including management rules and processing rules and one

7   or more anchor points to begin selected analysis

8   processes.

1   23.   The self-defining data element of claim 22, wherein

2   the management information comprises a time stamp.

1   24.   The self-defining data element of claim 22, wherein

2   the management information comprises a management rule.

1   25.   The self-defining data element of claim 24, wherein

2   the management rule comprises one of performance

3   criteria, reliability criteria, availability criteria,

4   and capacity criteria.

1   26.   The self-defining data element of claim 22, wherein

2   the management information comprises a pointer to a

3   management rule.

1   27.   The self-defining data element of claim 22, wherein

2   the management information comprises a sequencing rule.

1   28.   The self-defining data element of claim 27, wherein

2   the sequencing rule comprises one of a logical rule, a

3   time rule, and a structure rule.

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1   29. The self-defining data element of claim 22, wherein

2   the management information comprises a pointer to a

3   sequencing rule.

1   30. The self-defining data element of claim 22, wherein

2   the management information comprises a management

3   function for accomplishing management rules.